

FIG. 2

```
class tPerson
{
    m_name      string;
    m_age       int;
    m_locations tSetOfAddresses;    // This is a collection or multiset.
};

class tAddress
{
    m_street    string;
    m_city      string;
    m_zip       string;
};

class tEmployee : tPerson
{
    m_empNo     string;
    m_dept      string;
    m_photo     image;
};

Class tPartTimeEmployee : tEmployee
{
    m_hoursPerWeek int;
};
```

FIG. 3

Generating a Fragment
for Primitive Members:
Object With No Nested Members

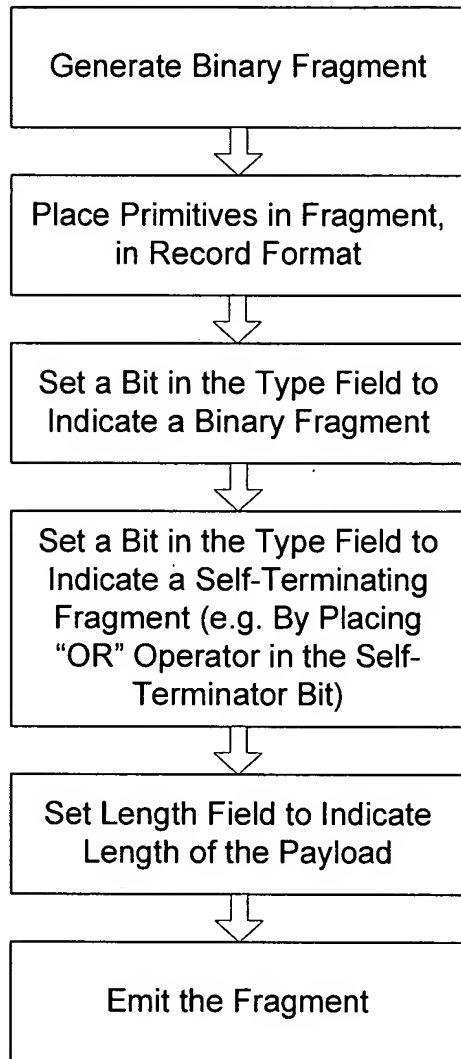


FIG. 4

Generating a Fragment
for Primitive Members:
Object With Nested Members

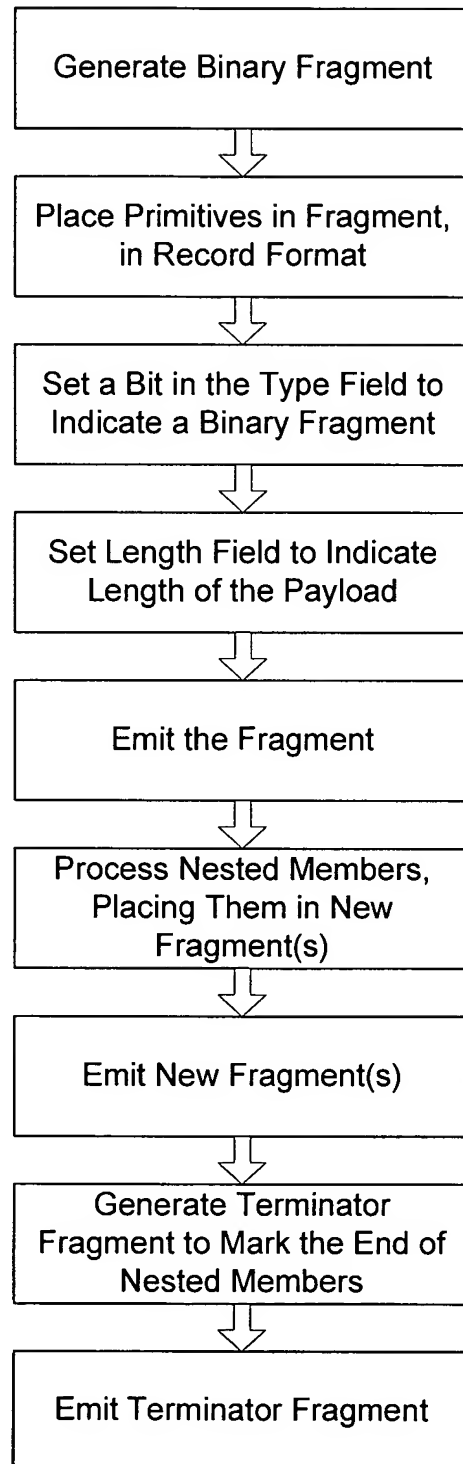


FIG. 5

Generating Fragments for Collection Members

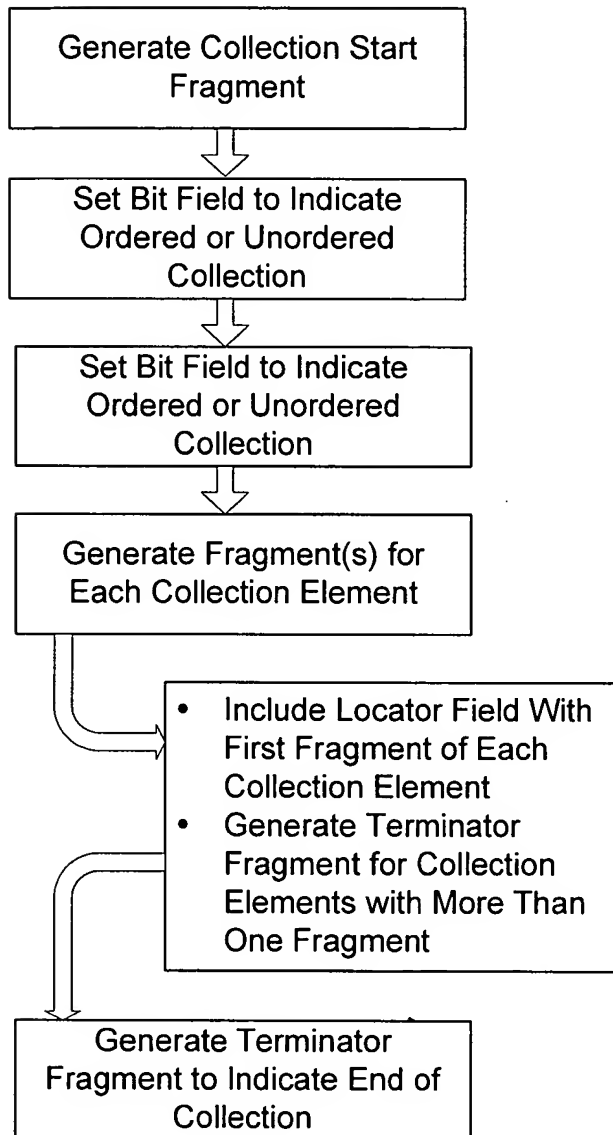


FIG. 6

Generating Fragments for LOB and FS Members

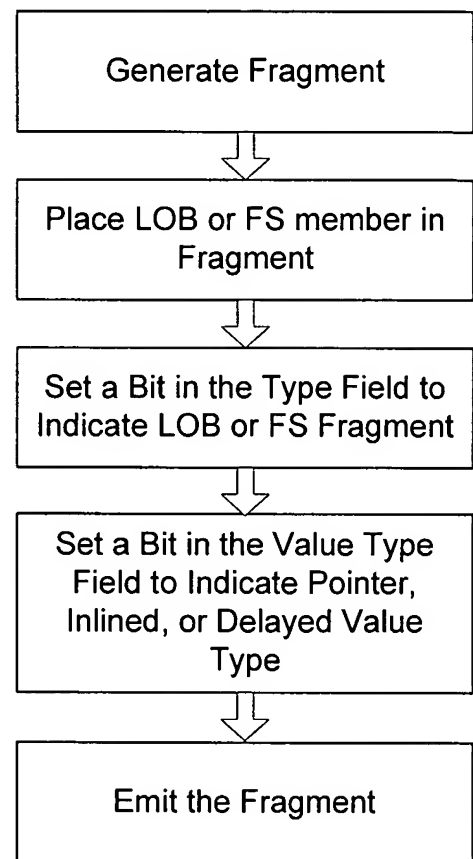


FIG. 7

Serializing an Entire Object

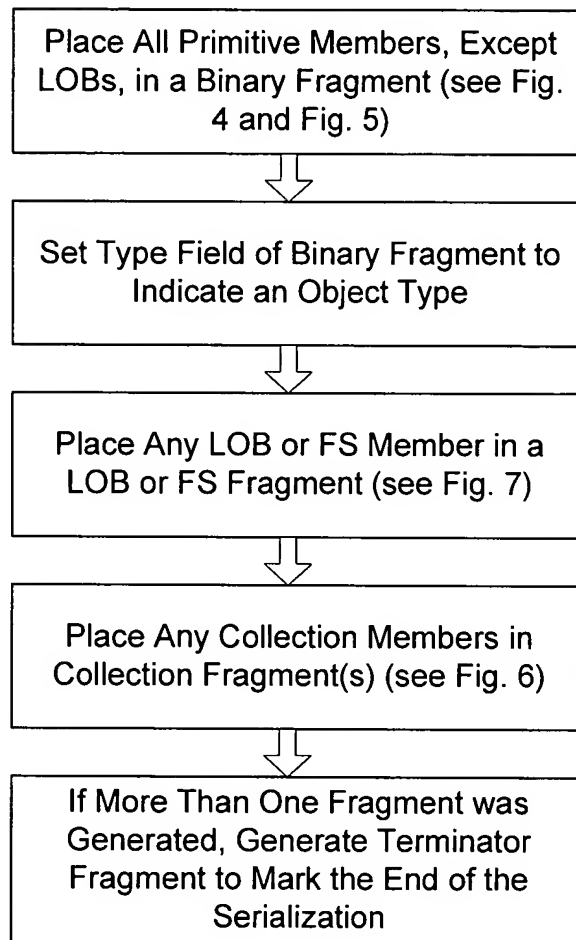


FIG. 8

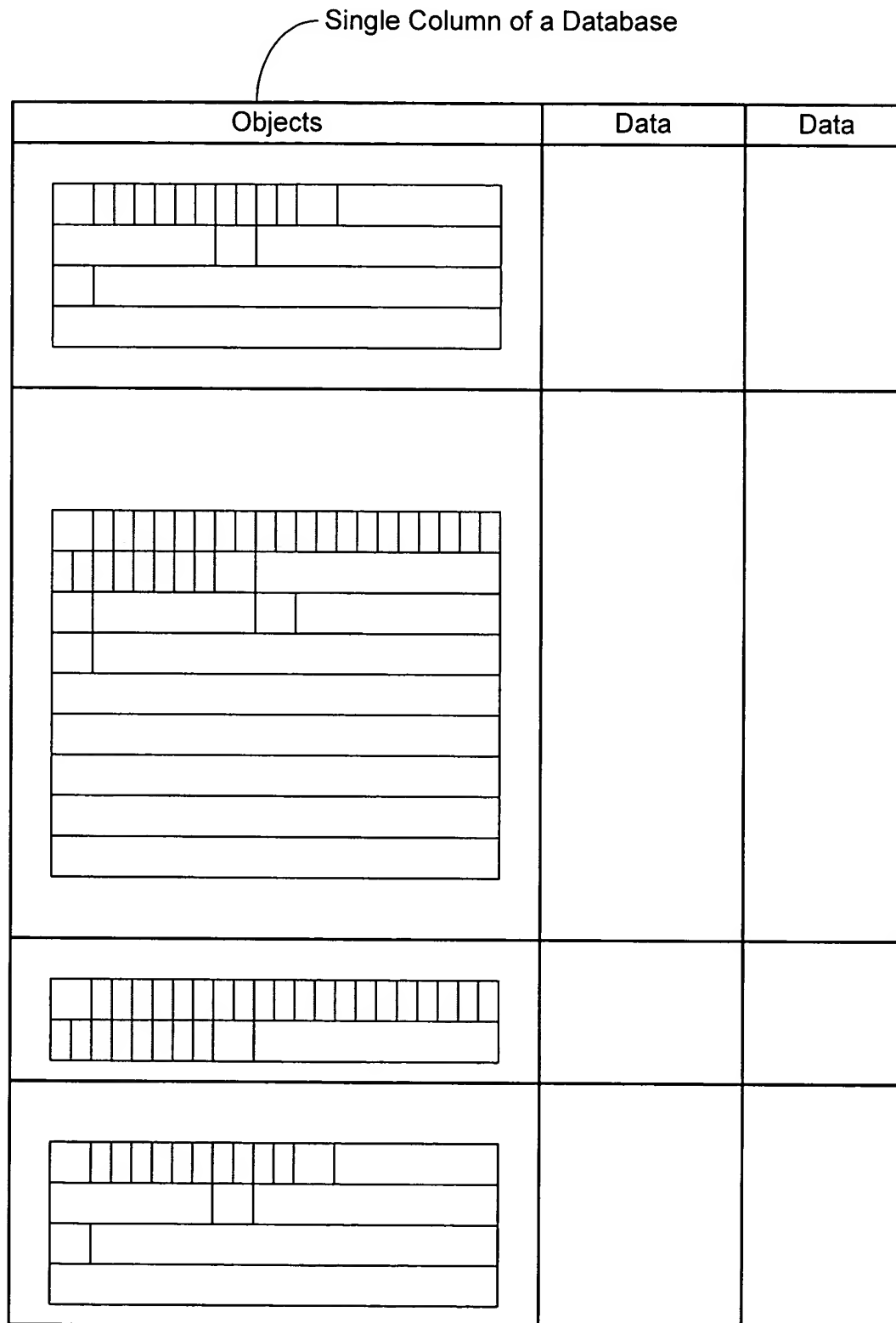


FIG. 9

Metadata for Person Objects

Name	Phone #	Address	SS#	Weight
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Person Object Records

Henry	547-5268	2 N. 53rd St.	383-99-9876	230lbs
Margaret	549-9254	4 N. 67 th St.	398-74-4565	160lbs

(Prior Art)
FIG. 10

Type (1byte)	Length (2bytes)	Payload – SE Record	← FIG. 11(A)
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Type (1byte)	Value Type (1 byte)	Length (2 or 8 bytes)	Payload – LOB, Pointer, or Cell Reference	↑ FIG. 11(B)
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Type (1byte)	Value Type (1 byte)	Length (2 or 8 bytes)	Payload – FS, Pointer, or Cell Reference	↑ FIG. 11(C)
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Type (1byte)	← FIG. 11(D)
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Type (1byte)	Bit field (2bytes)	← FIG. 11(E)
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Type (1byte)	Length (2bytes)	Locator (4bytes)	Payload – Collection Element	↑ FIG. 11(F)
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Type (1byte)	← FIG. 11(G)
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Type (1byte)	Locator (4bytes)	← FIG. 11(H)
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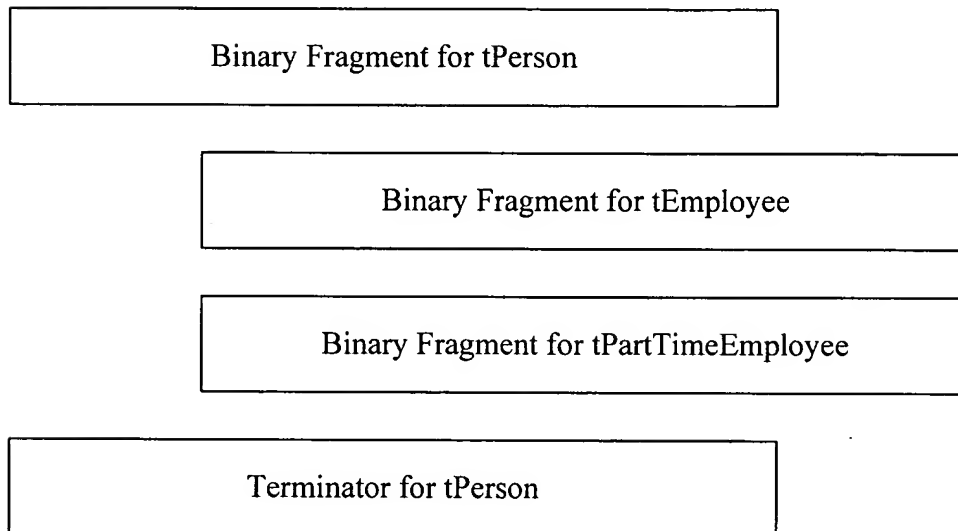


FIG. 12